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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/520,367	01/06/2005	Thomas Buntin Threewitt	PPD 50705	5091
26748	7590	08/29/2006	EXAMINER	
SYNGENTA CROP PROTECTION, INC. PATENT AND TRADEMARK DEPARTMENT 410 SWING ROAD GREENSBORO, NC 27409			SOROUSH, ALI	
			ART UNIT	PAPER NUMBER
			1616	

DATE MAILED: 08/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/520,367

Applicant(s)

THREEWITT ET AL.

Examiner

Ali Soroush

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-3 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In the specification under the heading "Examples", Table 2 lists seven herbicidal compositions and the effectiveness of each composition in controlling weeds in sorghum crop as well as the percent damage incurred by the crop following treatment with each composition. Although the data appears to be convincing at first glance, compositions 1-7 are not clearly defined in terms of active ingredients. In other words an artisan reading the specification would not know the chemical make-up of each composition in the Table. Table 1 is unclear as to the exact components of the herbicidal compositions. Table 1 discloses an active ingredient "2.5". This ingredient is not defined in the specification nor is it well known to someone with ordinary skill in the art. Therefore, the correlation between the compositions in Table 1 and Table 2 is not clear nor is the outcome of the testing of the composition on the plots comprising sorghum and test weeds easily discernable. For this reason a lack of written description

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is warranted. It is suggested that Table 1 be amended to clearly identify the components and concentrations of each herbicidal composition.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-3 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The term "2.5" in Table 1 is not clearly defined and therefore renders the claims indefinite.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

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the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cornes (International Application published under PCT WO 02/100173; published December 19, 2002) in view of Kent et al. (Technology of Cereals; published 1994).

Cornes teaches "a synergistic herbicidal composition comprising; (A) mesotrione, and: (B) a second herbicide selected from; ... (B5) dicamba ... or their herbicidally effective salts." (See page 10, claim 1). Cornes further teaches "the object of the formulation is to apply the compositions to the locus where control is desired by a convenient method. The 'locus' is intended to include soil, seeds and seedlings, as well as established vegetation. The composition can be used over a wide range of crops, such as corn (maize), wheat, rice, potato or sugarbeet. Suitable crops include those which are tolerant to one or more of components (A) or (B), or to any other herbicide, such as glyphosate that can be additionally included in the composition." (See page 5, lines 20-26). Cornes also teaches "a herbicidal composition according to claim 3, wherein the weight ratio of component (A) to component (B) is between about 8:1 and 1:15." (See page 11, claims 4). Cornes further teaches "... the composition contains components (A) and (B) in relative amounts sufficient to provide an application rate of at

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least 1.0 kg/ha, of which component (A) provides at least 0.02 kg/ha." (See page 5, lines 13-14).

The instant application claims a composition to control weeds in a crop of sorghum. The difference between the instant claims and Cornes is that Cornes does not teach the use of the composition on sorghum. However, it is known in the prior art that mesotrione and dicamba have been used to treat cereal crops of which sorghum is a cereal crop. It is for that reason that the examiner joins Kent et al. with Cornes.

Kent et al discloses, "The principal cereal crops are wheat, barley, oats, rye, rice maize, sorghum, and the millets" (See page 1, paragraph 1). It would have been obvious to one having ordinary skill in the art to modify the invention of Cornes to include the sorghum crop. With regard to the application rate of mesotrione, Cornes discloses an application rate, which encompasses the instant rate of 50- 300 g/ha as recited in the claimed invention. In the absence of showing of the criticality of the narrower application rate disclosed in the instant invention, Cornes makes obvious the instant application rate. With regard to the amount of component B (dicamba) amounting to 0.5 – 400% of the amount of the total composition being applied to the cereal crop, an artisan would have been expected to determine the optimum amounts of B to be applied. In addition, the amounts of component B being applied in Cornes very well cover the instant amount (0.5 – 400%) since through routine experimentation of Cornes' invention can lead an artisan arriving at the instant percent of component B being applied. One would have been motivated to do this in order to develop a method

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that would have been effective in controlling weeds in crop while not being detrimental to crop growth.

Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hacker et al (U.S. Patent 6,723,681 B2; published April 20, 2004) in view of Kent et al. (Technology of Cereals; published 1994).

Hacker et al. teaches a method for controlling harmful plants in cereal crops comprising the step of applying to the cereal crop a herbicidal composition comprising an active ingredient A (broad spectrum herbicide) plus one or more additional herbicides including prosulfuron, 2,4-D, dicamba, and/or mesotrione. Hacker does not exemplify a method wherein mesotrione is specifically combined with 250-300 g/ha 2,4-D, 1-100 g/ha prosulfuron, and/or 10-300 g/ha dicamba and does not teach the application of his compositions to sorghum crop and the instant application rates of mesotrione. However, Kent et al. discloses that sorghum is a cereal crop. It would have been obvious to one having ordinary skill in the art to modify the invention of Hacker et al. to include the sorghum crop. One would have been motivated to do this since Kent et al. discloses that sorghum is a cereal crop. With regard to the method comprising mesotrione, 2,4-D, prosulfuron, and dicamba one would have been motivated to make such a composition comprising all four herbicides and then apply the composition to the cereal, because Hacker et al. suggests that all four herbicides can be used to control harmful plants in cereal crops. In addition, the combination of the four herbicides would broaden the spectrum of harmful plants which can be controlled in cereal crops. With regard to the application rate of mesotrione, Hacker et al. discloses an application rate,

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which encompasses the instant rate of 50- 300 g/ha as recited in the claimed invention. In the absence of showing of the criticality of the narrower application rate disclosed in the instant invention, Hacker et al. makes obvious the instant application rate. With regard to the amount of component B (2,4-D, prosulfuron, dicamba) amounting to 0.5 – 400% of the amount of the total composition being applied to the cereal crop, an artisan would have been expected to determine the optimum amounts of B to be applied. In addition, the amounts of component B being applied in Hacker et al. very well cover the instant amount (0.5 – 400%) since through routine experimentation of Hacker et al.'s invention can lead an artisan arriving at the instant percent of component B being applied. One would have been motivated to do this in order to develop a method that would be effective in controlling weeds in crop while not being detrimental to crop growth.

Examiner acknowledges unexpected data in Tables 1 and 2 and will consider data at the time of overcoming the 112 1st and 2nd paragraph rejections as wells as the art rejections in this official office action.

Conclusion

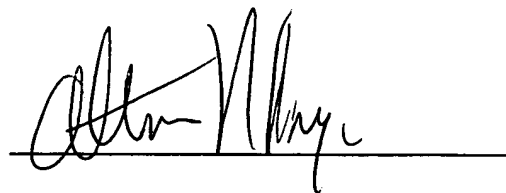
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ali Soroush whose telephone number is (571) 272-9925. The examiner can normally be reached on Monday through Thursday 8:30am to 5:00pm E.S.T.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann Richter can be reached on (571) 272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Ali Soroush
Patent Examiner
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A handwritten signature in black ink, appearing to read 'Alton Pryor', is written over a horizontal line.

Alton Pryor
Primary Patent Examiner
Technology Center 1600